

---

## Appendix E. Notices

This information was developed for products and services offered in the U.S.A. IBM may not offer the products, services, or features discussed in this document in other countries. Consult your local IBM representative for information on the products and services currently available in your area. Any reference to an IBM product, program, or service is not intended to state or imply that only that IBM product, program, or service may be used. Any functionally equivalent product, program, or service that does not infringe any IBM intellectual property right may be used instead. However, it is the user's responsibility to evaluate and verify the operation of any non-IBM product, program, or service.

IBM may have patents or pending patent applications covering subject matter described in this document. The furnishing of this document does not give you any license to these patents. You can send license inquiries, in writing, to:

IBM Director of Licensing  
IBM Corporation  
North Castle Drive  
Armonk, NY 10504-1785  
U.S.A.

**The following paragraph does not apply to the United Kingdom or any other country where such provisions are inconsistent with local law.**

INTERNATIONAL BUSINESS MACHINES CORPORATION PROVIDES THIS PUBLICATION "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF NON-INFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. Some states do not allow disclaimer of express or implied warranties in certain transactions, therefore, this statement may not apply to you.

This information could include technical inaccuracies or typographical errors. Changes are periodically made to the information herein; these changes will be incorporated in new editions of the publication. IBM may make improvements and/or changes in the product(s) and/or the program(s) described in this publication at any time without notice.

Any references in this information to non-IBM Web sites are provided for convenience only and do not in any manner serve as an endorsement of those Web sites. The materials at those Web sites are not part of the materials for this IBM product and use of those Web sites is at your own risk.

IBM may use or distribute any of the information you supply in any way it believes appropriate without incurring any obligation to you.

Any performance data contained herein was determined in a controlled environment. Therefore, the results obtained in other operating environments may vary significantly. Some measurements may have been made on development-level systems and there is no guarantee that these measurements will be the same on generally available systems. Furthermore, some measurement may have been estimated through extrapolation. Actual results may vary. Users of this document should verify the applicable data for their specific environment.

Information concerning non-IBM products was obtained from the suppliers of those products, their published announcements or other publicly available sources. IBM has not tested those products and cannot confirm the accuracy of performance, compatibility or any other claims related to non-IBM products. Questions on the capabilities of non-IBM products should be addressed to the suppliers of those products.

---

## Safety Notices (Multi-Lingual Translations)

The following safety notices are provided in English, French, German, Italian, and Spanish languages.

---

### Safety Notice 1

Before removing any FRU, power-off the system unit, unplug all power cords from electrical outlets, remove the battery pack, then disconnect any interconnecting cables.

Avant de retirer une unité remplaçable en clientèle, mettez le système hors tension, débranchez tous les cordons d'alimentation des socles de prise de courant, retirez la batterie et déconnectez tous les cordons d'interface.

Die Stromzufuhr muß abgeschaltet, alle Stromkabel aus der Steckdose gezogen, der Akku entfernt und alle Verbindungskabel abgenommen sein, bevor eine FRU entfernt wird.

Prima di rimuovere qualsiasi FRU, spegnere il sistema, scollegare dalle prese elettriche tutti i cavi di alimentazione, rimuovere la batteria e poi scollegare i cavi di interconnessione.

Antes de quitar una FRU, apague el sistema, desenchufe todos los cables de las tomas de corriente eléctrica, quite la batería y, a continuación, desconecte cualquier cable de conexión entre dispositivos.

---

### Safety Notice 2

Some standby batteries contain a small amount of nickel and cadmium. Do not disassemble it, recharge it, throw it into fire or water, or short-circuit it. Dispose of the battery as required by local ordinances or regulations. Use only the battery in the appropriate parts listing. Use of an incorrect battery can result in ignition or explosion of the battery.

Certaines batteries de secours contiennent du nickel et du cadmium. Ne les démontez pas, ne les rechargez pas, ne les exposez ni au feu ni à l'eau. Ne les mettez pas en court-circuit. Pour les mettre au rebut, conformez-vous à la réglementation en vigueur. Lorsque vous remplacez la pile de sauvegarde ou celle de l'horloge temps réel, veillez à n'utiliser que les modèles cités dans la liste de pièces détachées adéquate. Une batterie ou une pile inappropriée risque de prendre feu ou d'exploser.

Die Bereitschaftsbatterie, die sich unter dem Diskettenlaufwerk befindet, kann geringe Mengen Nickel und Cadmium enthalten. Sie darf nur durch die Verkaufsstelle oder den IBM Kundendienst ausgetauscht werden. Sie darf nicht zerlegt, wiederaufgeladen, kurzgeschlossen, oder Feuer oder Wasser ausgesetzt werden. Die Batterie kann schwere Verbrennungen oder Verätzungen verursachen. Bei der Entsorgung die örtlichen Bestimmungen für Sondermüll beachten. Beim Ersetzen der Bereitschafts- oder Systembatterie nur Batterien des Typs verwenden, der in der Ersatzteilliste aufgeführt ist. Der Einsatz falscher Batterien kann zu Entzündung oder Explosion führen.

### **Safety Notice 2 (continued)**

Alcune batterie di riserva contengono una piccola quantità di nichel e cadmio. Non smontarle, ricaricarle, gettarle nel fuoco o nell'acqua né cortocircuitarle. Smaltirle secondo la normativa in vigore (DPR 915/82, successive disposizioni e disposizioni locali). Quando si sostituisce la batteria dell'RTC (real time clock) o la batteria di supporto, utilizzare soltanto i tipi inseriti nell'appropriato Catalogo parti. L'impiego di una batteria non adatta potrebbe determinare l'incendio o l'esplosione della batteria stessa.

Algunas baterías de reserva contienen una pequeña cantidad de níquel y cadmio. No las desmonte, ni recargue, ni las eche al fuego o al agua ni las cortocircuite. Deséchelas tal como dispone la normativa local. Utilice sólo baterías que se encuentren en la lista de piezas. La utilización de una batería no apropiada puede provocar la ignición o explosión de la misma.

### **Safety Notice 3**

The battery pack contains small amounts of nickel. Do not disassemble it, throw it into fire or water, or short-circuit it. Dispose of the battery pack as required by local ordinances or regulations. Use only the battery in the appropriate parts listing when replacing the battery pack. Use of an incorrect battery can result in ignition or explosion of the battery.

La batterie contient du nickel. Ne la démontez pas, ne l'exposez ni au feu ni à l'eau. Ne la mettez pas en court-circuit. Pour la mettre au rebut, conformez-vous à la réglementation en vigueur. Lorsque vous remplacez la batterie, veillez à n'utiliser que les modèles cités dans la liste de pièces détachées adéquate. En effet, une batterie inappropriée risque de prendre feu ou d'exploser.

Akkus enthalten geringe Mengen von Nickel. Sie dürfen nicht zerlegt, wiederaufgeladen, kurzgeschlossen, oder Feuer oder Wasser ausgesetzt werden. Bei der Entsorgung die örtlichen Bestimmungen für Sondermüll beachten. Beim Ersetzen der Batterie nur Batterien des Typs verwenden, der in der Ersatzteilliste aufgeführt ist. Der Einsatz falscher Batterien kann zu Entzündung oder Explosion führen.

La batteria contiene piccole quantità di nichel. Non smontarla, gettarla nel fuoco o nell'acqua né cortocircuitarla. Smaltirla secondo la normativa in vigore (DPR 915/82, successive disposizioni e disposizioni locali). Quando si sostituisce la batteria, utilizzare soltanto i tipi inseriti nell'appropriato Catalogo parti. L'impiego di una batteria non adatta potrebbe determinare l'incendio o l'esplosione della batteria stessa.

Las baterías contienen pequeñas cantidades de níquel. No las desmonte, ni recargue, ni las eche al fuego o al agua ni las cortocircuite. Deséchelas tal como dispone la normativa local. Utilice sólo baterías que se encuentren en la lista de piezas al sustituir la batería. La utilización de una batería no apropiada puede provocar la ignición o explosión de la misma.

## Safety Notice 4

### CAUTION

The lithium battery presents a fire, explosion, or severe burn risk. Do not recharge it, remove its polarized connector, disassemble it, heat it above 100°C (212°F), incinerate it, or expose its cell contents to water. Dispose of the battery as required by local ordinances or regulations. When replacing the battery, use only Part No. 33F8354. Use of another battery could result in ignition or explosion of the battery. Replacement batteries can be ordered from IBM or IBM Authorized Dealers.

### ADVARSEL

Litiumbatteriet kan forårsage brand, eksplosion eller alvorlige brandsår. Det må ikke genoplades, åbnes, udsættes for mere end 100 grader C, brændes eller komme i berøring med vand. Desuden må man ikke fjerne forbindelsesstikket fra det. Litiumbatteriet destrueres som foreskrevet af myndighederne. Ved udskiftning af litiumbatteriet anvendes partnummer 33F8354. Brug af andre former for batterier kan medføre, at batteriet brænder eller eksploderer. Nye batterier bestilles gennem IBM eller IBM-forhandleren.

### WAARSCHUWING

De lithiumbatterij kan brand- en explosiegevaarlijk zijn. De batterij mag niet worden opgeladen, gedemonteerd, verbrand of boven 100°C worden verhit. Laat de inhoud niet in aanraking komen met water en verwijder de gepolariseerde aansluiting niet. Bescherm het milieu; lever oude batterijen in bij inzamelpunten. Gebruik ter vervanging uitsluitend batterijen met bestelnummer 33F8354. Gebruik van andere batterijen kan leiden tot ontbranding of explosie. Nieuwe batterijen kunnen worden besteld bij IBM of geautoriseerde IBM-dealers.

### ATTENTION !

Prenez garde aux risques d'incendie, d'explosion et de brûlures graves liés à l'utilisation d'une pile au lithium. Ne rechargez pas la pile, n'en retirez pas le connecteur et ne la démontez pas. Ne la chauffez pas au-delà de 100°C (212°F) et n'en exposez pas le contenu à l'eau. Détruisez-la conformément à la réglementation en vigueur. Si vous la remplacez, commandez une pile de rechange sous la référence 33F8354 : toute autre pile risquerait de prendre feu ou d'exploser. Les piles de rechange peuvent être obtenues auprès d'IBM ou d'un distributeur agréé IBM.

### VAROITUS

Litiumparisto voi syttyä tuleen, räjähtää tai aiheuttaa vakavia palovammoja. Ölä koskaan lataa paristoa uudelleen, irrota pariston polarisoitua liitintä, pura paristoa, kuumenna paristoa yli 100°C lämpötilaan, polta paristoa tai päästä vettä pariston sisään. Hävitä paristo paikallisten määräysten mukaisesti. Vaihda pariston tilalle ainoastaan tuote 33F8354. Muun pariston käyttö voi johtaa sen syttymiseen tai räjähtämiseen. Vaihtoparistoja voi tilata IBM:stä tai valtuutetulta IBM-jälleenmyyjältä.

### ACHTUNG

Lithiumbatterien sind feuergefährlich, explosiv und können schwere Verätzungen verursachen. Bei Außerbetriebsetzen (Verschrotten) des Gerätes örtliche Entsorgungsrichtlinien für Sondermüll beachten. Die Batterie darf nicht mit Wasser in Berührung gebracht, über 100 Grad erhitzt, wieder aufgeladen, repariert oder zerlegt werden. Eine verbrauchte Batterie nur durch eine Batterie mit der Teilenummer 33F8354 ersetzen. Andere Batterien können sich entzünden oder explodieren. Ersatzbatterien können von IBM oder einem IBM Vertragshändler bezogen werden.

#### Safety Notice 4 (continued)

##### ATTENZIONE

La batteria al litio può incendiarsi, esplodere o procurare serie bruciature. Evitare di ricaricarla, toglierle il connettore polarizzato, smontarla, riscaldarla ad una temperatura superiore ai 100 gradi centigradi, incendiarla o gettarla in acqua. Per eliminarla seguire le procedure di sicurezza aziendali e quanto stabilito dal DPR 915 del 10-9-82 e successive disposizioni. Sostituire solo con la parte IBM N. 33F8354. L'uso di una diversa batteria potrebbe provocare incendi o esplosioni. Ordinare le batterie all'IBM o ai rivenditori autorizzati.

##### ADVARSEL

På grunn av brann- og eksplosjonsfare må ikke litiumsbatterier lades opp, taes fra hverandre, brennes eller utsettes for sterk varme over 100°C. Ikke fjern de polariserte tilkoblingene eller utsett batteriene for vann. Brukte batterier bør kastes så raskt som mulig og i henhold til gjeldende forskrifter. Bruk bare batterier med delnummer 33F8354 når du bytter batteri. Bruk av feil batteri kan føre til at batteriet antennes eller eksploderer. Nye batterier kan bestilles fra autoriserte IBM PC-forhandlere.

##### CUIDADO

A pilha de lítio representa um risco de incêndio, explosão ou de graves queimaduras. Não a recarregue, remova o conector polarizado, desmonte, aqueça acima de 100°C (212°F), queime ou molhe o conteúdo da célula. Destrua a pilha de acordo com os regulamentos locais. Quando substituir a pilha, utilize apenas a peça com o número de referência 33F8354. A utilização de qualquer outra pilha poderá ocasionar auto-ignição ou explosão da pilha. Podem ser encomendadas pilhas sobresselentes à IBM ou aos seus Concessionários Autorizados.

##### VARNING:

Litiumbatterier kan explodera eller börja brinna. Ladda inte upp det, ta inte bort dess polariserade anslutningar, upphetta det inte över 100°C, ta inte isär det och utsätt inte batteriets cellinnehåll för vatten. Om du ska byta batteriet ska du byta till ett batteri med beställningsnummer 33F8354. Om du använder något annat batteri kan det antändas eller explodera. Beställ batterier från IBM eller från en av IBM auktoriserad återförsäljare.

##### PRECAUCION

La batería de litio representa un peligro de incendio, explosión o de graves quemaduras. No la recargue, quite su conector polarizado, desmonte, caliente a más de 100°C (212°F), la incinere o someta su contenido al agua. Deshágase de la batería según los reglamentos u ordenanzas locales. Utilice como recambio sólo el número de pieza No. 33F8354. La utilización de otra batería podría provocar su deflagración o explosión. Las baterías de recambio pueden pedirse a IBM o a Concesionarios Autorizados IBM.

#### **Safety Notice 5**

Though main batteries have low voltage, a shorted or grounded battery can produce enough current to burn combustible materials or personnel.

Bien que le voltage des batteries principales soit peu élevé, le court-circuit ou la mise à la masse d'une batterie peut produire suffisamment de courant pour brûler des matériaux combustibles ou causer des brûlures corporelles graves.

Obwohl Hauptbatterien eine niedrige Spannung haben, können sie doch bei Kurzschluß oder Erdung genug Strom abgeben, um brennbare Materialien zu entzünden oder Verletzungen bei Personen hervorzurufen.

Sebbene le batterie di alimentazione siano a basso voltaggio, una batteria in corto circuito o a massa può fornire corrente sufficiente da bruciare materiali combustibili o provocare ustioni ai tecnici di manutenzione.

Aunque las baterías principales tienen un voltaje bajo, una batería cortocircuitada o con contacto a tierra puede producir la corriente suficiente como para quemar material combustible o provocar quemaduras en el personal.

---

## Safety Information

This section contains the safety information that you need to be familiar with before servicing an Industrial Computer.

### General Safety

Follow these rules to ensure general safety.

- Observe good housekeeping in the area of the system units during and after maintenance.
  - When lifting any heavy object:
    1. Ensure you can stand safely without slipping.
    2. Distribute the weight of the object equally between your feet.
    3. Use a slow lifting force. Never move suddenly or twist when you attempt to lift.
    4. Lift by standing or by pushing up with your leg muscles; this action removes the strain from the muscles in your back. *Do not attempt to lift any objects that weigh more than 16 kg (35 lb) or objects that you think are too heavy for you.*
  - Do not perform any action that causes hazards to the customer, or that makes the equipment unsafe.
  - Before you start the system unit, ensure that other service representatives and the customer's personnel are not in a hazardous position.
  - Place removed covers and other parts in a safe place, away from all personnel, while you are servicing the system unit.
  - Keep your tool case away from walk areas so that other people will not trip over it.
  - Do not wear loose clothing that can be trapped in the moving parts of a system unit. Ensure that your sleeves are fastened or rolled up above your elbows. If your hair is long, fasten it.
  - Insert the ends of your necktie or scarf inside clothing or fasten it with a nonconductive clip, approximately 8 centimeters (3 inches) from the end.
  - Do not wear jewelry, chains, metal-frame eyeglasses, or metal fasteners for your clothing.
- Remember:** Metal objects are good electrical conductors.
- Wear safety glasses when you are: hammering, drilling, soldering, cutting wire, attaching springs, using solvents, or working in any other conditions that might be hazardous to your eyes.
  - After service, reinstall all safety shields, guards, labels, and ground wires. Replace any safety device that is worn or defective.
  - Reinstall all covers correctly before returning the system unit to the customer.

## Electrical Safety

### CAUTION:

Electrical current from power, telephone, and communication cables can be hazardous. To avoid any shock hazard, you should disconnect all power cords and cables as described in the following information.

For your safety, always do the following *before* removing the cover:

1. Turn off the system unit and any attached devices, such as printers, displays, and external drives.

**Note:** Industrial computer users in the United Kingdom who have a modem or fax machine attached to your system unit must disconnect the telephone line from the system unit *before* unplugging any power cords (also known as power cables). When reassembling the system unit, reconnect the telephone line *after* plugging in the power cords.

2. Unplug all the power cords from electrical outlets.
3. Disconnect all communication cables from external receptacles.
4. Disconnect all cables and power cords from the back of the system unit.

**Note:** Do not reconnect any cables or power cords until you reassemble the system unit and put the cover back on.

### CAUTION:

Never remove the cover on the power supply. If you have a problem with the power supply, have your system unit serviced.

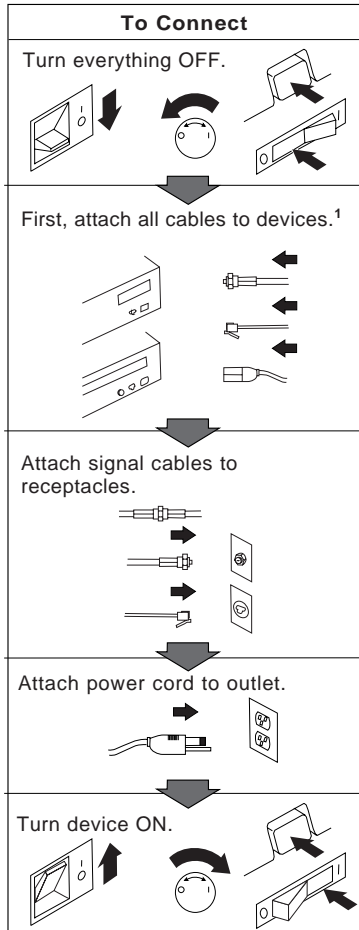
### CAUTION:

The system unit with options can weigh as much as 15 kilograms (33.3 pounds). Do not attempt to lift it by yourself if you think it is too heavy for you.

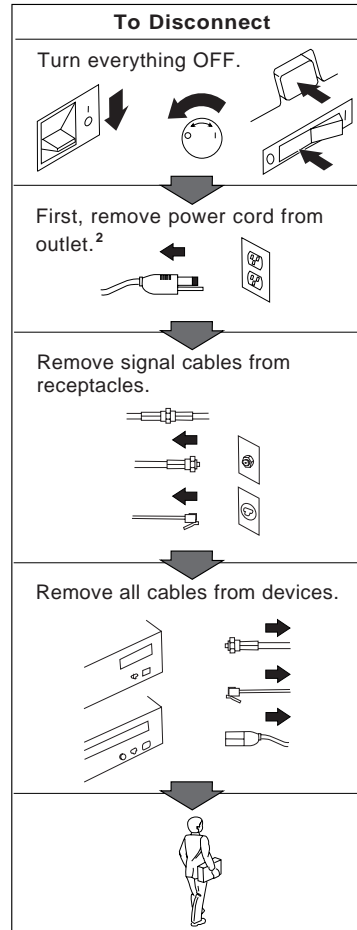


**DANGER:**

Electrical current from power, telephone, and communication cables is hazardous. To avoid shock hazard, connect and disconnect cables as shown below when installing, moving or opening the covers of this product or attached devices. The power cord must be used with a properly grounded outlet.



<sup>1</sup> In the U.K., by law, the telephone cable must be connected after the power cord.



<sup>2</sup> In the U.K., by law, the power cord must be disconnected after the telephone line cable.

Observe the following rules when working on electrical equipment.

### Important

Use only approved tools and test equipment. Some hand tools have handles covered with a soft material that does not insulate you when working with live electrical currents.

Many customers have, near their equipment, rubber floor mats that contain small conductive fibers to decrease electrostatic discharges. Do not use this type of mat to protect yourself from electrical shock.

- Find the room emergency power-off (EPO) switch, disconnecting switch, or electrical outlet. If an electrical accident occurs, you can then operate the switch or unplug the power cord quickly.
- Do not work alone under hazardous conditions or near equipment that has hazardous voltages.
- Disconnect all power before:
  - Performing a mechanical inspection
  - Working near power supplies
  - Removing or installing main units
- Before you start to work on the system unit, unplug the power cord. If you cannot unplug it, ask the customer to power-off the wall box that supplies power to the system unit and to lock the wall box in the off position.
- If you need to work on a system unit that has *exposed* electrical circuits, observe the following precautions:
  - Ensure that another person, familiar with the power-off controls, is near you.

**Remember:** Another person must be there to switch off the power, if necessary.

- Use only one hand when working with powered-on electrical equipment; keep the other hand in your pocket or behind your back.

**Remember:** There must be a complete circuit to cause electrical shock. By observing the above rule, you may prevent a current from passing through your body.

- When using testers, set the controls correctly and use the approved probe leads and accessories for that tester.
- Stand on suitable rubber mats (obtained locally, if necessary) to insulate you from grounds such as metal floor strips and system unit frames.

Observe the special safety precautions when you work with very high voltages; these instructions are in the safety sections of maintenance information. Use extreme care when measuring high voltages.

- Regularly inspect and maintain your electrical hand tools for safe operational condition.
- Do not use worn or broken tools and testers.
- *Never assume* that power has been disconnected from a circuit. First, *check* that it has been powered-off.
- Always look carefully for possible hazards in your work area. Examples of these hazards are moist floors, nongrounded power extension cables, power surges, and missing safety grounds.
- Do not touch live electrical circuits with the reflective surface of a plastic dental mirror. The surface is conductive; such touching can cause personal injury and system unit damage.

- Do not service the following parts (and similar units) *with the power on* when they are removed from their normal operating places in a system unit (this practice ensures correct grounding of the system units):
  - Power supply units
  - Pumps
  - Blowers and fans
  - Motor generators
- If an electrical accident occurs:
  - **Use caution; do not become a victim yourself.**
  - **Switch off power.**
  - **Send another person to get medical aid.**

## Safety Inspection Guide

The intent of this inspection guide is to assist you in identifying potentially unsafe conditions on these products. Each system unit, as it was designed and built, had required safety items installed to protect users and service personnel from injury. This guide addresses only those items. However, good judgment should be used to identify potential safety hazards due to attachment of non-IBM features or options not covered by this inspection guide.

If any unsafe conditions are present, you must determine how serious the apparent hazard could be and whether you can continue without first correcting the problem.

Consider these conditions and the safety hazards they present:

- Electrical hazards, especially primary power (primary voltage on the frame can cause serious or fatal electrical shock).
- Explosive hazards, such as a damaged CRT face or bulging capacitor
- Mechanical hazards, such as loose or missing hardware

The guide consists of a series of steps presented in a checklist. Begin the checks with the power off, and the power cord disconnected.

Checklist:

1. Check exterior covers for damage (loose, broken, or sharp edges).
2. Power-off the system unit and disconnect the power cord.
3. Check the power cord for:
  - a. A third-wire ground connector in good condition. Use a meter to measure third-wire ground continuity for 0.1 ohm or less between the external ground pin and frame ground.
  - b. The power cord should be the appropriate type as specified in the parts listings.
  - c. Insulation must not be frayed or worn.
4. Remove the cover.
5. Check for any obvious non-IBM alterations. Use good judgment as to the safety of any non-IBM alterations.
6. Check inside the unit for any obvious unsafe conditions, such as metal filings, contamination, water or other liquids, or signs of fire or smoke damage.
7. Check for worn, frayed, or pinched cables.
8. Check that the power-supply cover fasteners (screws or rivets) have not been removed or tampered with.

## Handling Electrostatic-Discharge-Sensitive Devices

Any system unit part containing transistors or integrated circuits (ICs) should be considered sensitive to electrostatic discharge (ESD). ESD damage can occur when there is a difference in charge between objects. Protect against ESD damage by equalizing the charge so that the system unit, the part, the work mat, and the person handling the part are all at the same charge.

### Notes:

1. Use product-specific ESD procedures when they exceed the requirements noted here.
2. Make sure that the ESD protective devices you use have been certified (ISO 9000) as fully effective.

When handling ESD-sensitive parts:

- Keep the parts in protective packages until they are inserted into the product.
- Avoid contact with other people.
- Wear a grounded wrist strap against your skin to eliminate static on your body.
- Prevent the part from touching your clothing. Most clothing is insulative and retains a charge even when you are wearing a wrist strap.
- Use the black side of a grounded work mat to provide a static-free work surface. The mat is especially useful when handling ESD-sensitive devices.
- Select a grounding system, such as those listed below, to provide protection that meets the specific service requirement.

**Note:** The use of a grounding system is desirable but not required to protect against ESD damage.

- Attach the ESD ground clip to any frame ground, ground braid, or green-wire ground.
- Use an ESD common ground or reference point when working on a double-insulated or battery-operated system unit. You can use coax or connector-outside shells on these system units.
- Use the round ground-prong of the AC plug on AC-operated system units.

## Grounding Requirements

Electrical grounding of the system unit is required for operator safety and correct system unit function. Proper grounding of the electrical outlet can be verified by a certified electrician.

## Power Cord Notice

For your safety, IBM provides a power cord with a grounded attachment plug to use with this IBM product. To avoid electrical shock, always use the power cord and plug with a properly grounded outlet.

IBM power cords used in the United States and Canada are listed by Underwriter's Laboratories (UL) and certified by the Canadian Standards Association (CSA).

For units intended to be operated at 115 volts: Use a UL-listed and CSA-certified cord set consisting of a minimum 18 AWG, Type SVT or SJT, three-conductor cord, a maximum of 15 feet in length and a parallel blade, grounding-type attachment plug rated 15 amperes, 125 volts.

For units intended to be operated at 230 volts (U.S. use): Use a UL-listed and CSA-certified cord set consisting of a minimum 18 AWG, Type SVT or SJT, three-conductor cord, a maximum of 15 feet in length and a tandem blade, grounding-type attachment plug rated 15 amperes, 250 volts.

For units intended to be operated at 230 volts (outside the U.S.): Use a cord set with a grounding-type attachment plug. The cord set should be marked <HAR> and have the appropriate safety approvals for the country in which the equipment will be installed.

IBM power cords for a specific country are usually available only in that country:

| IBM Power Cord Part Number | Used in These Countries  |
|----------------------------|--|
| 13F9940                    | Argentina, Australia, New Zealand, Papua New Guinea, Paraguay, Uruguay, Western Samoa  |
| 13F9979                    | Afghanistan, Algeria, Andorra, Angola, Austria, Belgium, Benin, Bulgaria, Burkina Faso, Burundi, Cameroon, Central African Rep., Chad, Czech Republic, Egypt, Finland, France, French Guiana, Germany, Greece, Guinea, Hungary, Iceland, Indonesia, Iran, Ivory Coast, Jordan, Lebanon, Luxembourg, Macau, Malagasy, Mali, Martinique, Mauritania, Mauritius, Monaco, Morocco, Mozambique, Netherlands, New Caledonia, Niger, Norway, Poland, Portugal, Romania, Senegal, Slovakia, Spain, Sudan, Sweden, Syria, Togo, Tunisia, Turkey, former USSR, Vietnam, former Yugoslavia, Zaire, Zimbabwe |
| 13F9997                    | Denmark  |
| 14F0015                    | Bangladesh, Burma, Pakistan, South Africa, Sri Lanka   |
| 14F0033                    | Antigua, Bahrain, Brunei, Channel Islands, Cyprus, Dubai, Fiji, Ghana, Hong Kong, India, Iraq, Ireland, Kenya, Kuwait, Malawi, Malaysia, Malta, Nepal, Nigeria, Polynesia, Qatar, Sierra Leone, Singapore, Tanzania, Uganda, United Kingdom, Yemen, Zambia   |
| 14F0051                    | Liechtenstein, Switzerland   |
| 14F0069                    | Chile, Ethiopia, Italy, Libya, Somalia   |
| 14F0087                    | Israel   |
| 1838574                    | Thailand   |
| 20L2795                    | China (PRC)  |
| 62X1045                    | Bahamas, Barbados, Bermuda, Bolivia, Brazil, Canada, Cayman Islands, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Guyana, Haiti, Honduras, Jamaica, Japan, Korea (South), Liberia, Mexico, Netherlands Antilles, Nicaragua, Panama, Peru, Philippines, Saudi Arabia, Surinam, Taiwan, Trinidad (West Indies), United States of America, Venezuela  |

---

## **Required Electronic Emission and Connectivity Notices**

### **Class A Federal Communications Commission Statement**

#### **Federal Communications Commission (FCC) Statement**

**Note:** This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at his own expense.

Properly shielded and grounded cables and connectors must be used in order to meet FCC emission limits. IBM is not responsible for any radio or television interference caused by using other than recommended cables and connectors or by unauthorized changes or modifications to this equipment. Unauthorized changes or modifications could void the user's authority to operate the equipment.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

#### **Industry Canada Compliance Statement**

This Class A digital apparatus complies with the Canadian ICES-003.

Cet appareil numérique de la classe A conform à la norme NMB-003 du Canada.

#### **United Kingdom**

##### **Notice to United Kingdom Users**

This apparatus is approved under General Approval number NS/G/1234/J/100003 for indirect connection to public telecommunications systems in the United Kingdom.

#### **European Union (EU) Electromagnetic Compatibility Directive**

This product is in conformity with the protection requirements of EU Council Directive 89/336/EEC on the approximation of the laws of the Member States relating to electromagnetic compatibility.

IBM cannot accept responsibility for any failure to satisfy the protection requirements resulting from a non-recommended modification of the product, including the fitting of non-IBM option cards.

This product has been tested and found to comply with the limits for Class A Information Technology Equipment according to CISPR 22 / European Standard EN 55022. The limits for Class A equipment were derived for commercial and industrial environments to provide reasonable protection against interference with licensed communication equipment.

**Attention**

This is a Class A product. In a domestic environment, this product may cause radio interference, in which case, the user may be required to take adequate measures. If the Ethernet port is connected, 100 ohm category 5 shielded twisted-pair Ethernet cable must be used to reduce the potential for causing interference to radio and TV communications and to other electrical or electronic equipment. IBM cannot accept responsibility for any interference caused by other-than-recommended cables and connectors.

**Germany****Zulassungsbescheinigung laut Gesetz über die  
elektromagnetische Verträglichkeit von Geräten (EMVG)  
vom 30. August 1995**

Dieses Gerät ist berechtigt, in Übereinstimmung mit dem deutschen EMVG das EG-Konformitätszeichen - CE - zu führen.

Der Aussteller der Konformitätserklärung ist die:

International Business Machines  
Embedded Systems Development  
1798 N.W. Spanish River Boulevard  
Boca Raton FL 33431  
U.S.A.

Informationen in Hinsicht EMVG Paragraph 3, Abs. 2:

Das Gerät erfüllt die Schutzanforderungen nach EN 50082-1 und  
EN 55022 Klasse A.

EN 55022 Klasse A Geräte bedürfen folgender Hinweise:

Nach dem EMVG:

"Geräte dürfen an Orten, für die sie nicht ausreichend entstört sind, nur mit besonderer Genehmigung des Bundesministeriums für Post und Telekommunikation oder des Bundesamtes für Post und Telekommunikation betrieben werden. Die Genehmigung wird erteilt, wenn keine elektromagnetischen Störungen zu erwarten sind." (Auszug aus dem EMVG, Paragraph 3, Abs. 4)

Dieses Genehmigungsverfahren ist nach Paragraph 9 EMVG in Verbindung mit der entsprechenden Kostenverordnung (Amtsblatt 14/93) kostenpflichtig.

Nach der EN 55022:

"Dies ist eine Einrichtung der Klasse A. Diese Einrichtung kann im Wohnbereich Funkstörungen verursachen; in diesem Fall kann vom Betreiber verlangt werden, angemessene Maßnahmen durchzuführen und dafür aufzukommen."

Anmerkung:

Um die Einhaltung des EMVG sicherzustellen, sind die Geräte wie in den Handbüchern angegeben zu installieren und zu betreiben.

## Japan

### Japanese Voluntary Control Council for Interference (VCCI) Statement

This product is a Class A Information Technology Equipment and conforms to the standards set by the Voluntary Control Council for Interference by Information Technology Equipment. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

この装置は、情報処理装置等電波障害自主規制協議会（VCCI）の基準に基づくクラスA情報技術装置です。この装置を家庭環境で使用すると電波妨害を引き起こすことがあります。この場合には使用者が適切な対策を講ずるよう要求されることがあります。

## Korea

**Korean Communications Statement** Please note that this device has been certified for business use with regard to electromagnetic interference. If you find this is not suitable for your use, you may exchange it for one of residential use.

## Taiwan

### Taiwan Class A Warning Statement

This product is a Class A. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

警告使用者：  
這是甲類B 資訊產品，在  
居住的環境中使用時，可  
能會造成射頻干擾，在這  
種情況下，使用者會被要  
求採取某些適當的對策。



---

## Laser Compliance Statement

The CD-ROM drive in the system unit is a laser product. The CD-ROM drive's classification label (sample shown below) is located on the drive.

|  |  |
|--|--|
|  |  |
|         | CLASS 1 LASER PRODUCT<br>LASER KLASSE 1<br>LUOKAN 1 LASERLAITE<br>APPAREIL A LASER DE CLASSE 1<br>KLASSE 1 LASER APPARAT |
| <b>Note:</b> Do not open the drive; no user adjustments or serviceable parts are inside. |  |

The CD-ROM drive is certified in the U.S. to conform to the requirements of the Department of Health and Human Services 21 Code of Federal Regulations (DHHS 21 CFR) Subchapter J for Class 1 laser products.

In other countries, the drive is certified to conform to the requirements of EN60825.

Class 1 laser products are not considered to be hazardous. The CD-ROM drive has an internal Class I (1), 0.5-milliwatt, aluminum gallium-arsenide laser that operates at a wavelength of 760 to 810 nanometers.

The design of the laser system and the CD-ROM drive ensures that there is no exposure to laser radiation above a Class 1 (1) level during normal operation, user maintenance, or servicing conditions.

---

## German Power Switch Statement

The 7587 Computer power switch is marked with a “–” for On and an “O” for Off.

Der 7588 Hauptschalter ist mit einem “–” für ein-, und einem “O” für ausgeschalten versehen.

---

## Trademarks and Service Marks

The following terms are trademarks of the IBM Corporation in the United States or other countries, or both:

IBM                      Personal System/2  
TrackPoint II

Other company, product or service names may be the trademarks or service marks of others.

Microsoft, Windows, Windows NT, and the Windows logo are trademarks of Microsoft Corporation in the United States, other countries, or both.

MMX and Pentium are trademarks of Intel Corporation in the United States, other countries, or both. (For a complete list of Intel trademarks, see [www.intel.com/tradmarx.htm](http://www.intel.com/tradmarx.htm).)